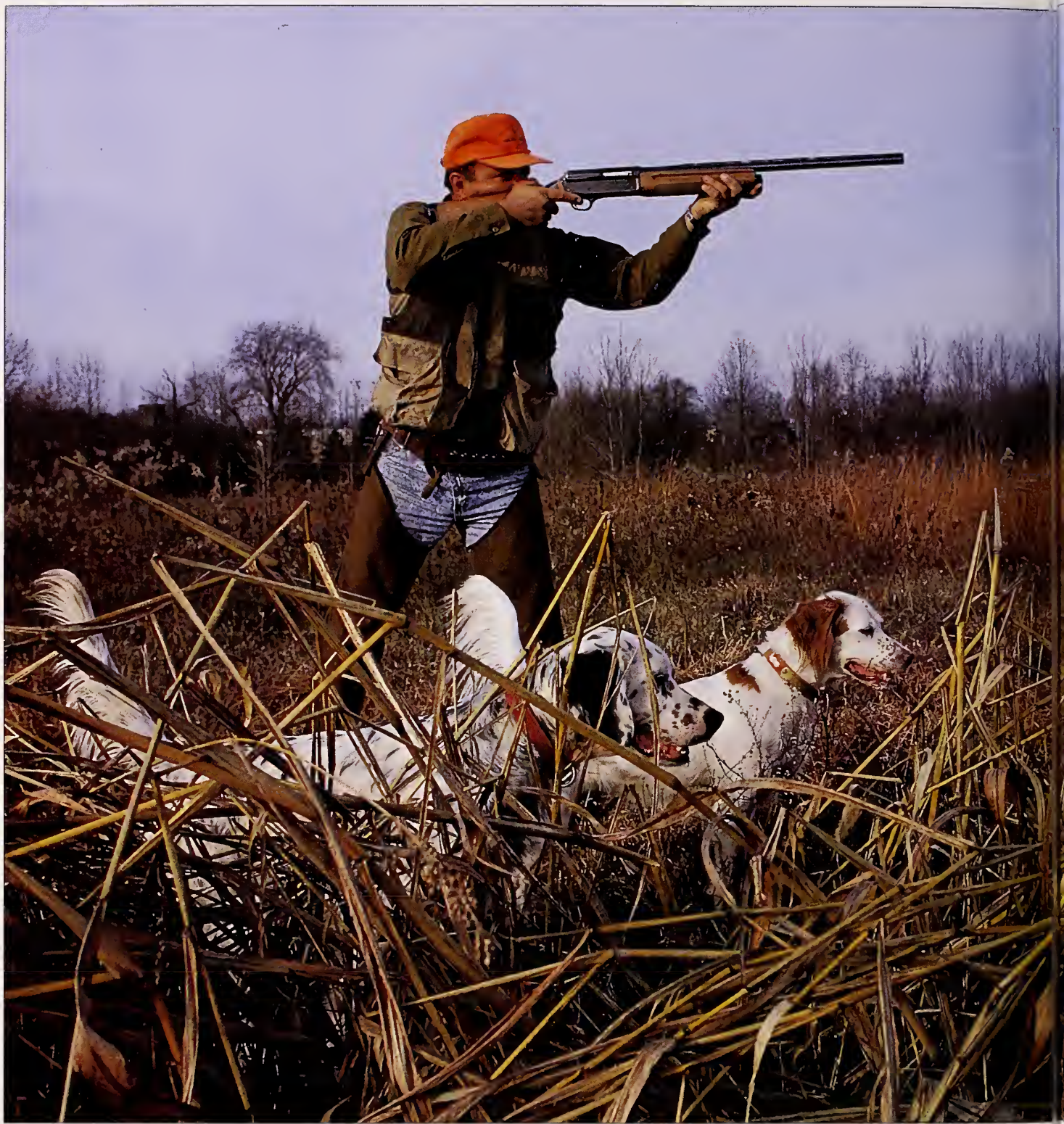


# VIRGINIA WILDLIFE

AUGUST 1993

ONE DOLLAR





*The sport of kings, wing-shooting is an art based on flawless form and graceful technique, not on keeping scores of hits or misses. See page 10 for an introduction to the graceful art of wing-shooting; photo by Dwight Dyke.*



# VIRGINIA WILDLIFE

**Cover:** Prehistoric reptiles of our waters, snapping turtles (*Chelydra serpentina*) are fascinating creatures. See page 4 for more; photo by Joe McDonald.

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*Dedicated to the Conservation of Virginia's Wildlife and Natural Resources*

# **Beauty is Only Skin Deep**



by Joseph C. Mitchell

**C**ommon snapping turtles (*Chelydra serpentina*) are well known to most people who spend time fishing, hunting, or otherwise enjoying the outdoors in Virginia. These turtles reach large body sizes, possess nasty dispositions, and are good to eat. But despite being relatively well known to the general public, we have little information on many aspects of their biology in Virginia, and no data on the effects of harvesting on their populations.

Snapping turtles look like something from the prehistoric past. They are often viewed as ugly animals, largely because they have large heads and staring eyes, large, muscular limbs with long, sharp claws, and long tails with *Stegosaurus*-like projections. The shells of many snappers are often covered with algae and mud, giving them a slimy, dirty appearance; more like something that arose from the depths of the earth than out of a lake or river.

Some aspects of their behavior are legendary. When out of the water, snappers hiss with open mouths at anything threatening, including a human being walking up on them. They will turn to face you, and will often strike out, apparently attempting to bite you or hit you with their heads. Snappers have long, muscular necks that stretch to about half to two-thirds the length of their shells. The strike, or thrust, is straight out from the body if you are in front, but can be directed over the back of their shell if you are behind it. As these turtles turn to face you, they will lower the side of their shell facing you in order to protect their soft parts.

If you are unlucky enough to be bitten by a snapper, you will find that it is reluctant to let go. Although snappers, like all turtles, have no teeth, their bites are sharp, painful, and powerful. Some people have reported losing fingers, and many a stick has been broken when this force has been tested by humans. Some claim that snappers can bite

through broomsticks, but my experiments in this area have all failed.

All snapping turtle behaviors are accomplished by reflex action. No thinking or premeditation is involved. Each kind of stimulus is always followed by the same reaction. For example, if you put a stick in a snapper's mouth, it will bite down on it. If you hold it by its tail, it will extend its rear feet out and together.

Out of the water, snapping turtle behavior is completely predictable. In water, on the other hand, snappers are relatively docile. Sometimes they will bite, sometimes not. Commercial turtle collectors will probe

under banks and in stump holes with their bare hands (something I'll not try myself) and usually have no difficulties. I have stepped on and bumped into snappers in water, and only when I hauled them out on land did they invoke their typical, pugnacious behavior.

Snapping turtles are highly adaptable, aquatic predators that play important roles in the maintenance and dynamics of Virginia's wetlands. I have found these turtles in rivers, creeks, swamps, ponds, lakes, ditches, and coastal marshes. They inhabit virtually every sort of aquatic habitat throughout the



***Snapping turtles may have some prehistoric looks, but their biology and role in our freshwater and coastal environments is complex, fascinating, and full of undiscovered secrets.***

*Harking back to prehistoric times, snapping turtles might respectfully be said to look their age. Although they have no teeth, their bite is powerful and painful. Above: photo by Susan M. Glascock. Opposite: photo by Joe McDonald.*

Commonwealth, including pristine and highly polluted waters. They are voracious predators, consuming algae, aquatic plants, invertebrates (like diving beetles and crayfish), fish, frogs, salamanders, snakes, other turtles, muskrats and other mammals (usually as carrion), and small waterfowl. The ability to tolerate a wide variety of habitats and eat many kinds of prey makes this an-



*Above: The underparts of a snapping turtle are soft and vulnerable; photo by Lynda Richardson. Right: Snappers are but a mere 1.5 inches in shell length when they hatch from their eggs; photo by Joe McDonald.*

cient reptile an important organism to humans. Not only can we eat it, we can study it to obtain vital information on the quality of Virginia's aquatic environments.

Snapping turtles emerge from their hibernation sites under stumps, in banks, or in soft mud in late March to mid-April, depending on the weather. Mating occurs in spring and possibly in the fall. Females are smaller than males, reaching a maximum known upper shell length in Virginia of slightly over 13 inches and a weight of 19 pounds. The largest male I have measured was 16 inches in shell length and weighed 35.3 pounds. I have heard, however, of snappers caught in Virginia waters weighing as much as 50 pounds. Weight can vary greatly among individuals, depending on how much the turtle has eaten and how much fat it has amassed.

Females emerge from wetlands in late May through June and often travel considerable distances to nest and lay their eggs. They dig flask-shaped nests with their rear feet, again all by reflex action. In fact, the female does not turn around to inspect her work.

Nests sites are located in soft soil or sand, usually, but not always, in

the open. The number of golfball-sized eggs per nest varies in Virginia from about seven to 55, depending on the size of the female. Larger females lay more eggs than smaller ones.

There is no parental care; once the nest is covered, the female returns to the water. This is the most vulnerable time in a snapper's life. Few eggs survive being eaten by raccoons, skunks, foxes, and other animals.

A remarkable thing about snapping turtles, and many other turtles as it turns out, is that the temperature of the nest during incubation determines the sex of the hatchling. No X or Y chromosomes are involved as they are in humans. If the

ratio of the emerging hatchlings.

Eggs hatch in the nest in late July and August after an incubation period of about 70-90 days. Although it has not been demonstrated for snapping turtles in Virginia, some may even overwinter in the nest and emerge the following April. Hatchlings are about 1.5 inches in upper shell length. Once nest emergence has occurred, hatchlings make their way to the nearest water. These little turtles are vulnerable to a large number of predators, including herons and other wading birds, raccoons, skunks, foxes, and possibly some snakes. They are not aggressive as youngsters. Pugnacious behavior develops with age.



temperature in a snapping turtle's nest during the middle third of the developmental period is above 83 degrees F or below 70 F, all females will be produced. If the nest temperature is 73 and 75 F, all males will be produced.

Intermediate temperatures produce a mix of both males and females. In some nests, the eggs on the top of the pile are warmer and produce all females, whereas the eggs on the bottom are cooler and produce all males. Thus, the microhabitat the female selects for her nest has a great deal of influence on the sex

We know nothing about the growth of snapping turtles in Virginia. However, we do know that like most other vertebrates, growth in general is rapid until reproductive maturity is reached. The catch is that turtles have indeterminate growth. That is, the potential for growth never stops completely, as it does in mammals and birds. In a natural population in Michigan, snapping turtles are known to live as long as about 25 years. One individual, caught as an adult, has lived for 39 years in the Philadelphia Zoo and is still growing.

Snapping turtles, like most other turtles, commonly live 20-30 years. Why do they live so long? The current thinking is that they have to live this long to withstand the extreme low survivorship of eggs and juveniles. Adults have a much higher survival rate, as only raccoons, otters, and humans are known to kill them. The latter, of course, constitute the most important threat to this species.

Snapping turtles are known to sometimes pluck unsuspecting ducklings below the water's surface. This upsets a lot of people, and results in a desire to "get rid of the snapping turtles." The truth is, however, that some snappers do take

less than 1% of the prey eaten. A study in Maine determined that 10-13% of known waterfowl populations were killed by snappers.

There is obviously wide variation in the rate of waterfowl mortality and in the propensity of snappers to take these birds. Plus, not all deaths of waterfowl can be attributed to snappers, as many spend the night on land where they are susceptible to predators such as raccoons, opossums, foxes, and domestic cats.

It is said that there are five to seven kinds of meat in a single snapping turtle. Much of the meat lies in the large, muscular neck, but the legs also have a substantial amount. There are numerous recipes for

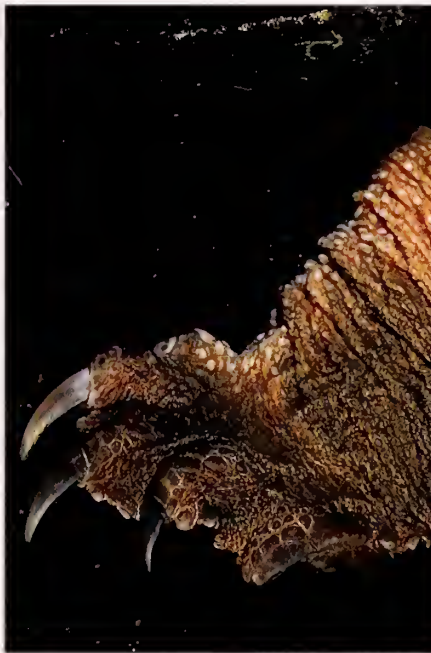
recent data suggest that consumers of snapping turtles should darn well know where their turtle meat came from.

Because snappers eat pretty much anything, often plants and animals that take up chemicals from the substrate, they are themselves the recipients of a host of contaminants that we humans have inflicted on our aquatic ecosystems. Snappers occupy the upper portion of the food web and are a good example of the phenomenon of biological magnification. That is, chemicals taken up in small amounts by organisms in the lower levels of the food web are accumulated in larger amounts by the organisms in the upper levels. And, don't forget that humans are at the top of these food webs.

A growing body of scientific literature is documenting the uptake and storage of toxic chemicals in snapping turtles. Chemicals that have been found in these turtles include organochlorides such as highly toxic PCBs and insecticides, and the heavy metals chromium, copper, mercury, nickel, and zinc. These chemicals are stored in body fat and fat cells in muscle tissue of snapping turtles. Females draw material from their fat bodies to produce eggs, and eggs have been found to contain substantial amounts of toxic chemicals.

The occurrence of toxic chemicals in the tissues of snapping turtles poses two problems. The first is obvious. How can you be sure that the turtle meat on your plate is free of harmful chemicals? I doubt snapping turtles are tested for chemicals contamination before they are butchered.

The second problem stems from the consumption of eggs and hatchlings in the terrestrial environment. The act of laying eggs in nests on land constitutes a transfer of energy and harmful chemicals from the aquatic environment to the terrestrial environment. Predators of eggs carry these chemicals into other parts of the environment where they are picked up by other organisms. The result is a dissemination of harmful substances throughout the



Seven to 55 golf ball-sized snapping turtle eggs (above left; photo by Joe McDonald) are laid in each nest every spring. The sex of each turtle is determined by the temperature in the nest. Hatchlings (left; photo by R. W. VanDevender) are subject to a variety of dangers, from raccoons and skunks to herons and snakes. Above: Equipped with remarkable, if intimidating claws, female snapping turtles use their rear claws to excavate nests, while all snappers use their front claws to tear prey into bite-sized pieces; photo by Joe McDonald.

cooking snappers. One was recently published in the April issue of *Virginia Wildlife*. This turtle has provided a source of protein for many generations of Americans. And until recently, one did not need to be concerned about the quality of the meat from these animals. However,

ducklings and some do not. A study of the stomach contents of 470 snappers in a Connecticut marsh revealed that ducklings comprised



*The future of snapping turtles in Virginia depends on the number of those pugnacious and long-lived adults surviving in our populations. Because so few snapping turtles survive to maturity, it is essential that breeding adults be protected—before the health of the species is in jeopardy; photo by Lynda Richardson.*

physical and biological components of the local environment.

I have long thought that it was possible to harvest snapping turtles on a sustainable basis. Research conducted by two of my colleagues in Michigan and Canada suggests, however, that I may be wrong. They have independently discovered that so-called "Head Start" programs will not sustain populations. These programs seek to increase the numbers of juveniles entering a population by artificially hatching eggs and then releasing them safely into aquatic habitats. By circumventing that precarious stage between egg-laying and hatching, the hope is that more turtles will survive to adulthood. However, such headstarting programs have not been able to rescue populations from decline. The only way to ensure that snapping turtle populations will survive is to minimize the loss of the breeding adults.

Snapping turtles are long-lived animals. Their evolutionary strategy is to produce eggs in as many years as possible so that at least some of their hatchlings make it to adulthood. The probability of a hatchling surviving to reproductive maturity is very low. In some years, none of the eggs produce hatchlings because of the intense predation on the nests.

The simple fact is that it takes a number of mature adult males and females in a population to sustain that population. Removal of these adults will cause a population to crash. And, for snapping turtle populations in Virginia, no seasonal restrictions or possession limits have been developed yet, nor are there prohibitions on taking females with eggs.

Can adult snapping turtles be harvested on a sustainable basis? This question has not been addressed anywhere in the range of snapping turtles. Yet, people contin-

ue to harvest these turtles in ways that promote population decline. Is there a middle ground somewhere?

The next time you encounter a snapping turtle in Virginia, think about the fact that its ancestors walked beneath the feet of dinosaurs. Think about how good it is to eat, and what the meat and fat may contain. And think about the fact that we know very little about the biology of *Chelydra serpentina*.

These animals may strike some as ugly and prehistoric, but after all, beauty is in the eye of the beholder. Snapping turtles are a part of the wonderful complexity of life on this planet and they may also contain some valuable answers to questions about the quality of Virginia's natural environments. □

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*Joe Mitchell teaches conservation biology at the University of Richmond and was the principal researcher on VDGIF's reptile and amphibian survey.*

# Put Swimming Fish and Wildlife Art on your walls!



The Virginia Department of Game and Inland Fisheries has produced two full-color fish identification posters. Just released is a 21 3/4" X 34" poster of 24 species of saltwater fish in Virginia. The second is a 21" X 36" poster of 23 freshwater game fish in Virginia. Each is available for only \$8! Specify which poster you'd like and send your check (made payable to the Treasurer of Virginia) to: Fish Poster, VDGIF, P.O. Box 11104, Richmond, VA 23230-1104.



## Winter Comfort

by Bob Henley

A limited edition of 950 . . .

Available now from *Virginia Wildlife*.



Order your very own limited edition (950) print of Bob Henley's "Winter Comfort" produced especially for *Virginia Wildlife*. You can own this 13"X 19 1/2" print signed and numbered by the artist for a mere \$45. But we can do even better! If you buy two one-year subscriptions to *Virginia Wildlife*, we'll give you "Winter Comfort" for \$35—that's a savings of \$10! So, why not adorn your walls with stunning wildlife art and your library with the best wildlife magazine around? Just fill out the gray card in this magazine or send your check (made payable to the Treasurer of Virginia) to: Winter Comfort offer, VDGIF, P.O. Box 11104, Richmond, VA 23230-1104.



by Henry Baskerville  
Photos by Dwight Dyke

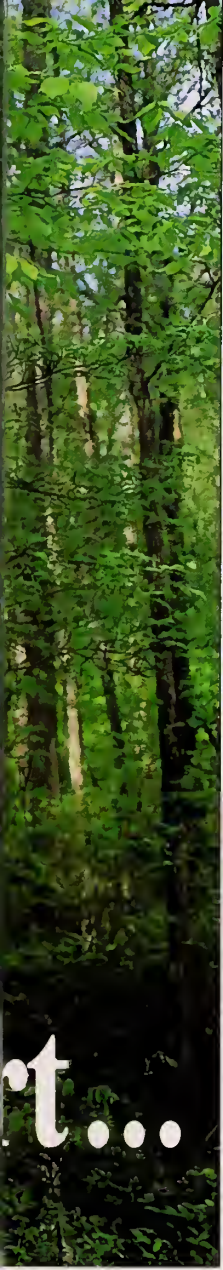
**W**ing-shooting is a sport of royalty. I learned this last summer while instructing some Spanish nobility near the small town of Ciudad Real in Spain. We were shooting on the beautiful sporting clays course at the Pinos Altos estate, owned by the world-acclaimed professional hunter, Fernando Saiz. Fernando, a man of considerable community position and social standing, explained to me that wing-shooting is an integral part of the total education of the children of

this elegant Spanish society. Such Spanish nobility require their children to be superbly educated, have an excellent equestrian style, to be versed in the proper social etiquette, and last, but certainly not least, to be able to wing-shoot with grace.

To the educated royal sportsman of Spain, "grace" is a broad concept encompassing strict safety procedures, economy of motion, flawless balance, proper head, arm, and hand placement, smooth swing, accurate target identification and assessment, efficient footwork, and a beautiful follow-through. In fact, the nobleman of Spain is more interested in the "grace" of the execution

than in his final score, because he realizes that attention to the art of wing-shooting will garner him more consistency than a paranoid attention to a score of hits and misses. Amusingly enough, successful shots accomplished without any grace are usually ridiculed. I remember my own experience in Spain when I swung clumsily to shoot a surprise clay which my friends had thrown for me. I broke the clay, but I did so with my right foot forward instead of my left foot. I received a lot of friendly teasing at dinner that night, which included imitations of my unusual technique!

In contrast to this European phi-



*A sport of royalty, wing-shooting is an art form which can only be mastered through an intelligent understanding and execution of flawless form and technique.*

laughing at him, the clay is still flying, and some local expert is screaming: "You shot behind it!"

Once our Young Hero regains his composure, he calls for another clay. In anxious response to the advice of the "local expert," he promptly spot shoots about 30 yards in front of the clay. Into his right ear Mr. Local Expert screams, "Yeerrraheadofit... DUM-MY!"

This maligned shooter has been a victim of *symptom* analysis and not *problem* analysis. The *symptom* was shot placement, but the *problem* was massive flinching. The *cause* of the problem lay in the acute pain, especially in the nasal area! The permanent bruise/break which he suffered on his nose was caused by poor shooting technique amplified by an abominable fitting gun of an excessively large gauge.

Notice that as an instructor, I am concerned with identifying *why* the shot flew to the incorrect spot in the sky, not *where* it flew to! The *problem*, which was flinching, answers the

nicely, the shots are easy...slow, incoming birds. Mr. Erraticus easily drops two geese with two shots, but our pal Y.H. brings down not even a single feather.

"How could I have missed?" moans Y.H. "I aimed that front bead right at the middle of the body, held the gun good and tight (so it wouldn't hurt my nose), and kept my feet wide apart (so I wouldn't be knocked off balance). You shoot so well, Mr. Erraticus. What's my problem?"

"Son I was lookin' at you (how could he have been when he was shooting at his own geese?), and I can tell you with absolute certainty (bosses are always certain) that you need to do two things and your shootin' will be perfect. You need to buy a NEW GUN and you REALLY need to LEAD a goose."

"Gosh, thanks, Mr. Erraticus," replied our Young Hero, "but tell me, please, EXACTLY, how do you shoot so well? Do you spot shoot, use a sustained lead, or do you use

# ... of Wing-shooting

philosophy, when I am teaching in America I constantly have to remind many students that the emphasis should be placed on the overall broad picture of their graceful wing-shooting form, than on their score. *Where* the shot string flies is never as important as *why* it flew there! The following struggles of a beginning shooter can help to explain this idea.

Imagine the case of a young shooter attempting to break a slow, incoming clay target. Such a scene usually conjures up a picture of a gangly twelve-year-old kid who is very unhappy because the recoiling stock of his dad's 12 bore side-by-side has bruised his nose, people are

question of "why?" The *symptom* of shooting behind the target only responds to the question of "where" the shot flew. By focusing on perfecting wing-shooting form, we can help to avoid getting bogged down in the minute distracting symptoms of poor shooting. All the cries of "Lead it more" or "Lead it less" have no place in such an arena. Any hit resulting from such instruction is pure luck!

Passage of time rarely cures such poor instruction, because existing errors are reinforced with practice rather than erased. Note what happens many years later, when Y.H. (short for Young Hero) takes up goose hunting with his boss, Mr. Erraticus.

As a great flock of geese decoy

the front bead to help you aim?"

"Well now...let me think about that." replied Mr. Erraticus, "I'll have to study exactly what I really am doing...it all happens just so naturally to me!"

It is fascinating to me that such banter between poorly foundationed shooters will succeed in eventually ruining them both. An emphasis on important wing-shooting specifics (such as lead, stance, eye focus, and technique) is dangerous to those illiterate in the art of wing-shooting.

Consider the downfall of Mr. Erraticus. We have here a rather natural athlete with fine hand/eye coordination. We also have a true Class A type personality—one who considers himself always the success of all

situations (and in all fairness, usually is), and rarely questions his own judgment.

His successes in the business world have given him false illusions of his competency in unrelated fields. His wing-shooting performances will always vacillate from quite acceptable to horrible, because when wing-shooting, he does not know *what* he does that is correct.

Mr. Erraticus has never had proper shooting techniques codified by a qualified instructor. A qualified instructor would have the student well-familiarized with many shooting techniques. The choice of which technique to employ for specific shots evolves with instruction. Any shooter well-grounded in the art of shooting should be able to readily identify his own personal technique of shooting. He should be able to instantly reply with reasonable certainty that he used a sustained lead method or a pass-through method, or whatever. Without this knowledge, all shots are largely a lucky whim!

Now, as a result of Mr. Erraticus's lack of knowledge, he

is susceptible to the suggestive powers of his own brain. Mention "sustained lead," and he will try to accomplish whatever he mistakenly envisions as a "sustained lead." Mention the "front bead on the barrel," and he will become oblivious to the fact that his shift of concentrated vision from the bird to the muzzle is creating physiological diplopia (double vision), which, according to the sports vision expert Dr. Wayne E. Martin, usually causes an errant swing.

His *problem* is that he has no established shooting foundation for his total shooting technique. You got it...no emphasis on "grace!" The *cause* of his problem centers around his own personality type. Mr. Erraticus thinks he's perfect. But he isn't!

Our Young Hero's shooting, on the other hand, did not improve, because by taking Mr. Erraticus's advice to buy a new gun, he is addressing the machine and not the operator. He reminds

me of a novice race-car driver who blames the automobile when he doesn't know how to drive! I agree

that Y.H. did need a new gun, but a new gun should never be purchased before the shooting technique is established in a coordinated, consistent manner. The new gun should then be purchased with proper analysis from a qualified person.

Y.H.'s technique was violently erred. Do you remember the way he "aimed that front bead?" This is a rifle technique, not a proper wing-shooting technique. On a shotgun, one focuses on the target, not on the bead or front sight. Also, the position of the feet should be closer together to facilitate a pleasant swing, and not the rigid stance he took to "keep his feet wide apart." If Y.H. were to purchase a new gun at this awkward stage, he would be counterproductive. Y.H.'s concerns mimicks an enthusiastic shooter who recently has read loads of "how to" articles. However, he does not understand his new-found information. He tries to enhance his command of the sport by using words like "spot shot" and "sustained lead." It is highly improbable that he had the vaguest idea of their true meaning.

As we envision Y.H. executing his shots, we can see many errors. His mount is poor, his visual concentration is misdirected, the gun doesn't fit, his stance is improper, and so

on...forever. If all these errors are valid, then what should we do to help the poor guy?

You say you can correct them one by one and eventually make a new and perfect shooter? There is that possibility, but it's a little like chasing rainbows. As soon as you correct one, another previously corrected error will surface again!

We have to remember the broad concept of grace. Take him back to the beginning. Create a solid foundation of flawless, graceful form, and then you, as an instructor, won't have to chase evasive rainbows with their pots of golden errors!





*Concentrating on form rather than on keeping score of hits and misses will help you develop into a better, more consistent shooter.*

In the pursuit of year-round shooting, Y.H. eventually decides to expand his horizons to sporting clays. Some of those guys that shoot regularly on the Gangly Goose Sporting Clays Course are "super good." And everyone knows that good shots are always the best teachers...aren't they?

The first day on the Gangly Goose Sporting Clays Course, Y.H. somewhat apprehensively signs up for a private round of 50 shots. He is pleased when he breaks 25. In the interest of friendliness, the course operator encourages our Young Hero to compete in an upcoming match.

"Oh, that's impossible! I'm not good enough!" he replies.

"Don't worry. You can surely place in your class!" says the range operator, "Why not return tomorrow for some more practice?"

Return and practice he does! So much so, that through sheer strength and awkwardness, his score sometimes improves about 10%! Although Y.H. undoubtedly is reinforcing bad habits with such practice, we must remember the old adage that "even a blind chicken will pick up an occasional kernel of corn." It is a shame when this occurs, because it makes such students as Y.H. believe that massive practice is the ultimate key to success. In truth,

he is not really practicing...he is only exercising! The difference lies in his thought process. Because, if he is shooting without any properly directed effort to understand his successes and failures, he will build no viable and lasting road to improvement. Therefore, the only tangible aspect of wing-shooting which evolves

for Y. H. at this stage is a paranoid interest in his scores. He has evolved into a "Competitor Man."

The good shots try to help. They mean well and some of their information is well chosen, but most of it lies in the realm of "Mo' lead" and "Les' lead." Instruction is simply not their job.

Finally, one very successful fellow competitor gently takes Y.H. aside from the rest of the group after he performed particularly dreadfully, and softly suggests that he would enjoy a proper lesson from a qualified instructor.

Notice that this gentleman recommended a "qualified instructor," not just an "instructor." There is always plenty of advice floating around, but not all of it is valid or effective. Be certain that you choose an instructor with teaching credibility, not just with shooting proficiency. There is a vast difference between performers and coaches. Performers can improve their *own* expertise, whereas coaches can improve the *student's* expertise. Being a fine performer does not necessarily make one a qualified coach!

It only took two decades and \$30,000 worth of shells and guns and gadgetry, but we finally have rescued our Young Hero by placing him in the hands of someone who

can teach him the graceful art of wing-shooting.

Look at the shots the instructor begins with: easy shots, but smoothly executed by Y.H. The instructor puts the emphasis on the overall concept of correct form, safety, economy of motion, smooth swing, and all those previously mentioned aspects of the graceful art of wing-shooting. Initially, there is very little mention of "more lead" or "less lead," because the instructor wants to erase bad habits and replace them with a sound foundation and proper form. The instructor presents Y. H. with fairly simple shots, such as the basic straight incomers combined with some slightly crossing incomers. These shots will offer a fine platform on which to teach the student "grace." There are only a few misses, which are quickly corrected with effortless and inoffensive tutelage which constantly addresses the "graceful art" and not "where the shot went."

Upon concluding the lesson, Y.H. is intercepted by his talented fellow shooter who inquires, "Did you enjoy the lesson? What did you learn?"

"It was wonderful. I learned that one must initially regress slightly in his score in order to progress. As a matter of fact, I don't think I will keep score today...I just want to work on my form."

To which his friend laughed, "He told you the secret, didn't he? Pay attention to the 'graceful art' and the scores will take care of themselves!"

When instructing or when practicing, try to look beyond the obvious errors of shooting in front of or behind the target. Adopt the philosophy of the educated royal sportsmen of Europe who realize that grace cannot be achieved by focusing on "hits" or "misses," but must be mastered by an intelligent understanding and respect for the art of wing-shooting and a perfection of its form. □

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*Henry Baskerville is a NSCA wing-shooting instructor and international hunting guide who lives in Richmond.*



# Tossing Out the Small Fry

by Rick Eades

Ask anglers in the western part of Virginia about fish stocking and they'll probably tell stories of hatchery trucks stopping at bridge crossings, dumping in rainbow trout, and being followed by caravans of anglers.

Ask anglers in the eastern part of Virginia about fish stocking, and they'll probably tell you the same stories. Not that the trout truck

*The story  
behind  
warmwater  
fish stocking  
in the Old  
Dominion.*





Warmwater fish stocking in our lakes and rivers is a complicated and sophisticated affair. **Opposite page:** Fingerlings are transported from hatchery ponds to trucks and driven to reservoirs (**top**; photo by Lee Walker), but the process of stocking begins weeks earlier when spawning adults spew eggs and sperm into tanks and hatchery personnel siphon eggs off into troughs (**bottom**; photo by Dwight Dyke). **This page:** Hatchery personnel start a quick release of fingerlings into a reservoir (**above**) to reduce stress on the young striped bass (**below**); photos by Lee Walker.

comes around down there, but it's the only story they know. Whenever and wherever anglers talk about fish stocking, the conversation usually focuses on trout. There is, however, another type of fish stocking that goes on around the state. But, while trout stocking is pretty straightforward, the stocking of other species is more complicated. When it comes to warmwater fish stocking in Virginia, the questions pop up immediately: "Why are some fish stocked in certain lakes and not others?" "How often are fish stocked in here?" "How big are the fish when they're stocked?"

To understand this kind of fish stocking, one has to understand fisheries management strategies, and most importantly, the concept of predator-prey balance.

For those who know a little about

aquaculture, or have simply noticed what's sold in the fish section at the supermarket, rainbow trout and channel catfish are the only two game fish that can be economically raised to marketable (or catchable) size in large numbers in a short period of time in Virginia. These fish can be raised in hatchery raceways or ponds in large numbers, since they readily accept artificial feed, grow fast and generally tolerate being crowded.

Other species just don't do as well. Thus, trying to

raise large numbers of them to catchable size just isn't practical or economical. Some species such as muskellunge won't eat pelleted feed, so a large supply of golden shiners is needed to keep them fed. Predatory and territorial species such as largemouth bass and northern pike are less tolerant of crowding and cannot be raised in these conditions like trout can. For species such as black crappie and bluegill, growth rates are slow and it can take up to three years for fish to reach catchable size.

The most efficient and economical way to raise game fish for Virginia's lakes and rivers is to let Mother Nature take care of feeding them. Rather than struggling for two years to raise a thousand walleyes to a pound in a hatchery to stock in a lake, the Virginia Department of Game and Inland Fisheries (VDGIF) will instead stock several thousand fingerling (1-2 inches) walleyes in a lake and let them grow up on their own.

For species such as walleye and striped bass that prefer deep open water, Virginia's impoundments can provide much better habitat than a hatchery pond or raceway.



Therefore, in most cases, we can expect these fish to do much better in a natural environment than confined in a fish hatchery.

When the hatchery truck pulls up to a lake with a load of striped bass, it doesn't mean there's going to be good fishing that day, but those fish will be providing fishing opportunities in a few years, and for 10 or more years thereafter. This brings us back to the question about frequency of stocking. Most stocked trout die off in the summer in Virginia streams, or they all get caught by anglers. Thus, annual stocking and often multiple stockings within a year are necessary to maintain a fishery. On the other hand, warmwater species such as largemouth bass, striped bass and walleye can survive for 10 years or more without restocking. In addition, many species will reproduce in stocked waters and maintain their own numbers, so only one stocking is needed to establish a permanent fishery.

In 1992, VDGIF stocked twice as many warmwater fish as trout, over 2 million, in fact. So, what were they, where did they go, and why? Ten species were raised in Department hatcheries and stocked in Virginia's warmwater lakes and rivers last year: largemouth bass, smallmouth bass, bluegill, redear, walleye, muskellunge, northern pike, channel catfish, striped bass, and hybrid striped x white bass. Walleye were the most abundant fish on the hatchery trucks, followed by striped bass.

There are several reasons why striped bass and walleye were our most commonly stocked fish. First of all is the popularity of these fish among anglers. Secondly, neither species reproduces naturally in most stocked waters, and thus they require annual or semi-annual stocking to maintain their numbers. Third, since these species generally do the best in Virginia's largest impoundments, it takes a large number of them to stock those big waters. Finally (and probably most importantly), these fish are effective open-water predators.

In any body of water, there's not much point in stocking a fish if it's



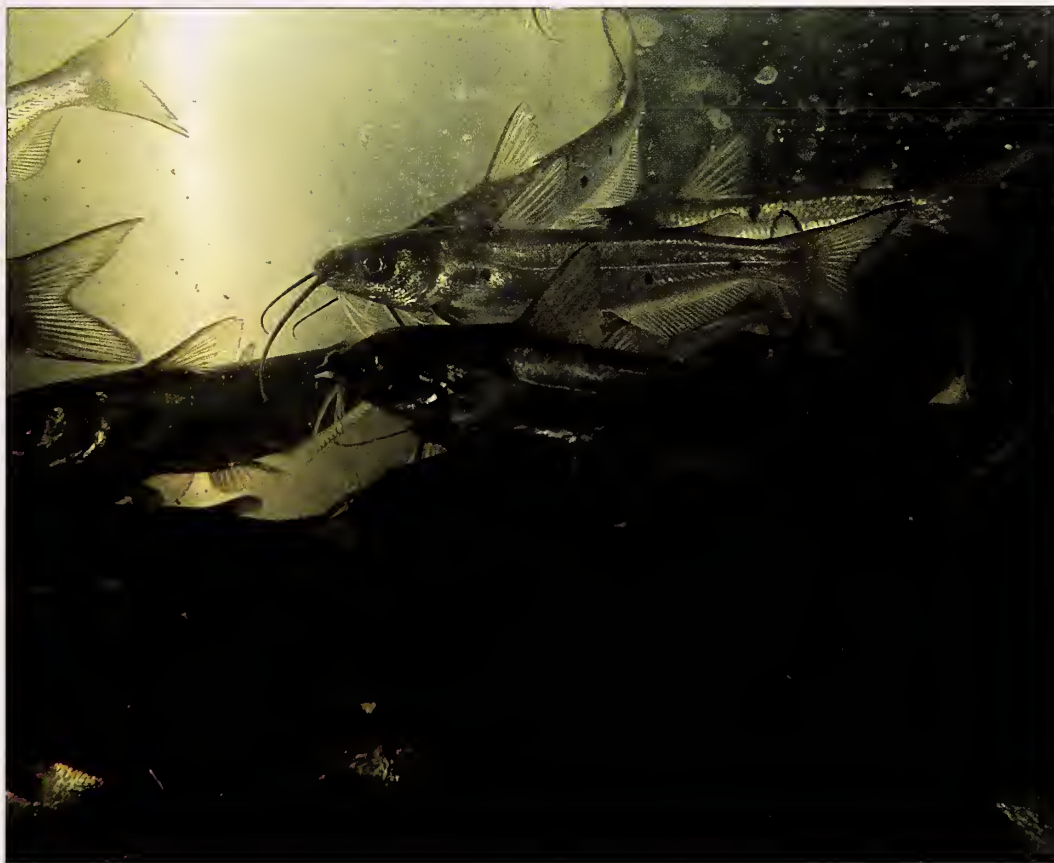
*Above: VDGIF Brookneal Hatchery Manager Steve Arthur holds flask of two-day-old striped bass fry. Raising and stocking one to five-inch fingerlings of most warmwater species is more efficient and economical than struggling for years to raise pound-sized fish. The idea is to let Mother Nature do the work. Left: A hormone is injected into a female striped bass at Brookneal hatchery to trigger release of eggs; photos by Lynda Richardson. Opposite page: Channel catfish fingerlings are stocked in small reservoirs and state lakes around Virginia; photo by Rob Simpson.*



not going to have anything to eat or habitat to live in. If stocking more striped bass means having less walleye in a lake, is that a good trade-off? If bluegill or white perch are stocked

in a lake, are they going to grow to good sizes, or are they going to overpopulate and grow so slowly that they never reach a decent size?

In deciding what fish, if any, to stock in a given body of water, fisheries biologists must ask themselves these and other questions. The first question, of course, is whether or not that fish will likely survive in that water. Chinook salmon would be a bad choice for stocking a lake in Virginia Beach,



while largemouth bass would be a good one. Smallmouth bass would be a bad choice for Lake Trashmore, but would be fine for Claytor Lake. So, if your favorite fish isn't found at your local lake, there's a good chance the reason is simply that the habitat or water temperature isn't suitable for that species.

If the habitat is suitable, the biologist must then look at food availability. In the case of large predators like striped bass and walleye, there must be a large number of prey fish available to sustain them. Typically, lakes must support large populations of gizzard shad, threadfin shad or alewives to establish a good striped bass fishery. Good shad populations are also desirable for walleye, but they also do well in lakes with abundant white perch. If these forage fish are not available, predators turn to other species preferred by largemouth bass or crappie.

Trade-offs must also be considered. Any water body can only support so many fish. If the predatory

fish in a lake are already effectively feeding on a lake's prey, stocking more fish isn't going to do any good. Stocking walleye in a lake without surplus forage would likely hurt the largemouth bass population in a lake through competition for food.

Ideally, the introduction of a new species shouldn't hurt the populations of desirable species already present in a lake. Striped bass were introduced into most large impoundments because they inhabit and feed on shad in deep open water, whereas other predators such as largemouth bass don't. Redear sunfish (shellcrackers) have been stocked statewide without hurting bluegill populations.

Finally, there's stocking just to provide anglers some exciting trophy fishing. Catfish anglers are enjoying the trophy blue catfish in the James and Rappahannock Rivers and flathead catfish in the western part of the state. Big muskellunge and northern pike are caught in select waters across Virginia every

year. While very difficult and expensive to produce in hatcheries, the Department stocked about 5,000 of each of musky and pike to provide some memorable catches for Virginia anglers.

So, this year while you're fishing your favorite lake, don't feel bad if you don't see the hatchery truck stop by and dump a load of two-pound crappie in front of you. They've probably been by recently with a load of fish that will be providing you with good fishing for years to come.

***Note:** The Department's 1993 Freshwater Fishing Guide features information on Virginia's public fishing waters and what species are found in each. Copies are available at most bait and tackle shops and by writing to: VDGIF, Freshwater Fishing Guide, 4010 W. Broad Street, Richmond, VA 23230-1104.*

*Rick Eades is a VDGIF fisheries biologist working in Virginia Beach.*

# Summertime Tree Stand Shopping

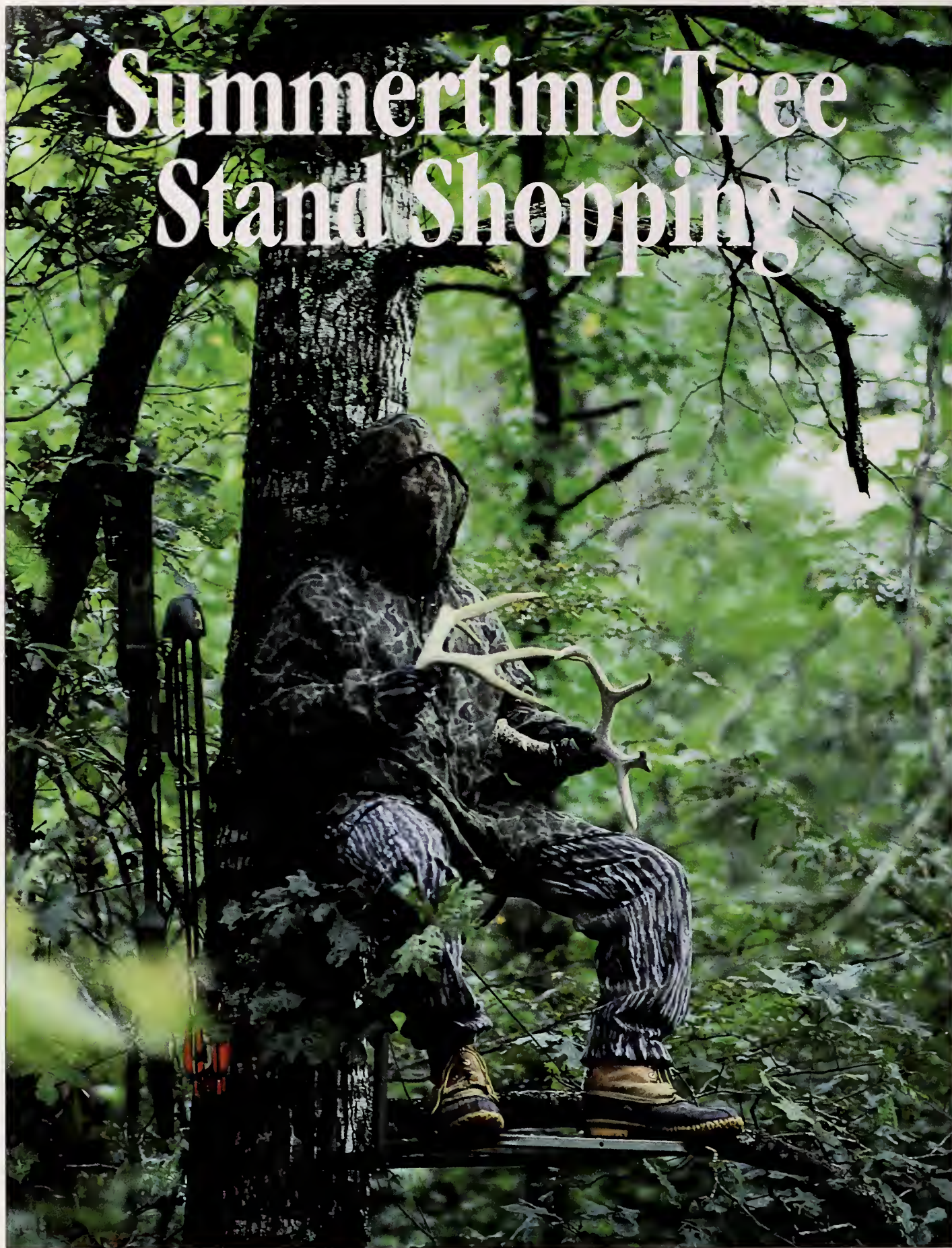


photo by Lloyd B. Hill

I start picking trees for portable stands every March. By then, the last hunting season is a month gone, the fishing hasn't really picked up yet, spring gobbler season is still 30 days away, and I'm at a low ebb. So I start looking for trees. Usually, the trees I pick in March are not the ones I wind up using in the fall, because the deer's habits change or something better always comes along, but tree picking helps pass the time and chase away the dreariness.

Stand picking on the other hand, is more important, and the choices need to be made wisely—and preferably well in advance of the time you plan to hang the stand in a tree. For a hunter anticipating buying a new portable tree stand, summer is a fine time to look. So break out your *Cabela's* or *Bass Pro Shops* catalog, or go by your friendly outdoor dealer's shop, and give the matter a little pre-season pondering. Here are some things to consider.

There are three basic kinds of portable stands: self-climbing models, fixed-position stands, and ladder stands. Each has advantages and disadvantages—a fact which makes a perfectly good argument for buying yourself more than one stand. I don't at present own a ladder stand, but I do have an old self-climber and three fixed stands. The self-climber is retired, but I use all three of the fixed stands hard.

The first portable stand I ever owned was an ancient climbing stand, a very small model, and it was without doubt the most uncomfortable hunting platform I have ever used. Climbing was by the "hug the tree and hoist your legs" method, and the chief advantage of the stand, other than its low price (free) and portability, was the fact that you could develop a set of tree-hugging muscles by the end of one season that would have been the envy of Hulk Hogan. Once in place it did not provide much in the way of comfort: you could lean against the tree or stand straight up, but any

attempt to shift your weight around or move your feet would make the stand creak and groan alarmingly. I always used it with a safety strap, of course, but the strap was only a little comforting. I kept imagining a moment when my little platform would decide to shinny on down the tree without me, leaving me suspended like an early Christmas decoration.

I junked the little stand later and got a larger climbing stand with a climbing handle, eliminating all that hugging. With this one, you stuck your toes through elastic cords on the platform, reached high above your head with the climber, locked it down on the trunk, raised your legs, and pulled the stand up after you. Each reach-up, lock-down, raise-the-legs-and-stand motion covered about three feet, so it really didn't take long to get as far up a smooth tree trunk as any sane person would ever want to go, which in my case

*Now is the time to shop  
for tree stands—in the  
cool of air-conditioned  
sporting goods shops. The  
question is: what kind  
should you buy?*

was not much above 15 or 20 feet. Spare elastic shock cords wrapped around the tree and secured the stand with adequate tension to prevent its losing its grip on the trunk, no matter how you shifted your weight. Another cord secured the climbing handle, which then became a seat, albeit not a very comfortable one.

The main problem, however, was that it really was not a very safe platform. It wiggled. It scared me, and I am now letting it gather cobwebs in my basement. Tales about similar stands dropping their occupants like camouflaged bombs prompted my decision. I am not afraid of heights, you understand, but I am afraid of hard landings, not to mention fast rides down tree trunks, and the design of this stand seemed to promise both.

The only safe way to use any climbing stand is with a safety belt *as you climb*, loosening the belt, moving it up, and tightening it at each step in the ascent or descent. This slows down the climbing motion a little, but it helps insure the hunter gets to climb more trees in the future.

Climbing stands have gotten fancier, more comfortable, and safer than mine in the years since I bought it, but I must say it served me well and was a lucky platform for me on several occasions. Many of the newer models, such as those made by Amacker, Warren and Sweat, Loggy Bayou, and Summit, feature padded seats and "stand-up, sit-down" climbing that greatly reduces the effort it takes to climb the tree, since the hunter uses his legs to push his way up rather than his arms to pull. They are also much safer and more stable than my old stands.

Many climbing stands feature sharp metal edges which bite into the bark of the tree, leaving visible and (often damaging) scars after the season is over. Others use rubber pads, which offer security without damaging the bark.

Prices on usable climbing stands range from about \$70 up to over \$200. Were I shopping for a climbing model now, I'd figure on spending between \$120 and \$200.

I've got a small, handy, fixed-position portable similar to the popular Loc-On Lem model. It is easy to carry into the woods, attaches quickly and simply to a tree, and is very unobtrusive. Its only disadvantages (other than the necessity to carry along screw-in or strap-on steps, of course) are its relatively small platform size and its small, low seat, which was apparently designed for dwarves. I am 6'4", and sitting on that particular model puts my knees near my ears and reduces both maneuverability and comfort pretty seriously. I prefer to stand. Still, the little thing is so quick to hang and so easy to hide that I find myself spending a lot of hours in it every fall. Similar models sell for around \$70.

More comfortable, but also a lot more cumbersome, is a welded steel

and aluminum model by Climax Tree Stands. It seems to weigh about as much as a spare tire, but it is very stoutly made and locks onto a tree with a chain and a set of spiked teeth. It is the most difficult stand to position properly that I own, and I don't move it around much during the season. Once locked in place, however, it is extremely stable and as comfortable as most permanent stands. The seat is about four inches higher than that on the smaller stand, and rising silently with a bow to a shooting position is easy. It's a little more expensive than the smaller stand, and much heavier, but it makes those hours of waiting a lot easier to bear.

My newest stand is, I think, destined to become my favorite. It's an API Alum-i-Lite which attaches to a tree with a simple buckle-and-strap arrangement and a stabilizer T-screw. It is quiet, very lightweight, and has a comfortable, sensible seat that is nearly two feet high. Since I've had it for only a few weeks (didn't I tell you summer was a good time to think about getting a new stand?), I haven't tried it on a hunt yet; but I have practiced hanging it from a few trees and climbing around in it, and it is solid, quiet, and more comfortable than the furniture in some modern houses. Like most other good stands these days, it comes with a no-nonsense safety belt, a good set of instructions, and precautionary list of do's and don'ts. I've seen very similar models from around \$80 to just over \$100. This one was less than \$90, but not a lot less.

I've never had a chance to use one of the ladder stands. They look like a good idea, even if they might be a little less portable than the others. Most of them are only about 10 or 12 feet tall, and I would want at least one, 3-foot extension: no dangling from a belt while trying to fix a strap or chain around a tree; no attaching steps; no hauling yourself up a tree by your arms. What they may lose in portability they may make up in handiness on site. There are several models and configurations, but most use a similar, simple-locking

device to attach the ladder to the tree. Weights range from around 20 to almost 30 pounds for the basic stand (several times what the best fixed-position portables weigh); extensions and add-ons such as camo kits increase weight further. Apache even makes one called the "Me and Dad" that is 14' tall and has two seats, one for a hunter and one for an accompanying child. Prices range all the way from around \$90 to over \$200 for ladder stands. Extension sections run another \$30 or so.

Aside from prices, weights, convenience, and portability, there are other considerations for each of the three types of stands. The fixed-position stands have to be used with some means of getting up and down the tree. That means a choice of screw-in or tie-on steps, or a snap-together ladder of some sort. Screw-in steps are the most frequently used solution. I like screws with a quick taper for easy self-starting in the tree, and I like folding steps for portability. Strap-on or tie-on steps are more expensive, but they do not harm the tree. (There is disagreement as to the harm done by screw-in steps. I have seen no damage to the trees on my own property, but I am sensitive to my hosts' desires about steps when hunting elsewhere. I will probably go to all strap-ons in the near future.)

Most stand placements take about eight steps, counting one or two extra at the top for supplementary hand-holds or for suspending gear. Setting up a good fixed-position portable, with all the steps, the safety strap, and a line of some sort for raising and lowering equipment, takes more than a few minutes of your leisurely midday time. It is best done several days or even a couple of weeks before the season begins, if possible. Trying to do it before dawn on a morning hunt is usually noisy, dangerous, and futile. Taking one down after dark can be tricky, too. Once in position, though, these stands have the considerable advantages of being sturdy, easy to conceal, quiet, and reasonably comfortable. They are by far the lightest of the three designs, they can be used at any height, and they adapt to either limbless or heavily limbed trees, as long as the strap or chain is long enough to fit around the tree. I mount all three of mine before bow season, and usually wind up moving one or two of them later in the year when the animals' habits change. Having three, already-mounted stands to choose from greatly expands my hunting options.

I have heard of folks having their fixed-position stands stolen, and some hunters on public land or

## A Comparison of Portable Stands

Types	Advantages	Disadvantages	Approx. Cost
Climbing stands	Self contained, no steps or ladders needed. Best models now are comfortable and safe.	Fairly heavy, sometimes feel less stable than others. Can only be used on limbless trees.	\$150
Fixed-position	Very lightweight, best models are quickly mounted and very comfortable. Can be used on any shape tree, with or without limbs, if size is suitable.	Must be used with steps or ladder; some models tough to hang properly.	\$90
Ladder type	Very stable and secure feeling, easy to enter and exit safely. Simple design.	Very heavy; least "portable" of all—meant to be semi-permanent. May need extra extension sections to provide enough height.	\$160



*Self-climbing stands don't require the use of steps or ladders and are much safer today than they were several years ago. They do, however, require some leg and arm work; photo by Dwight Dyke.*

heavily-hunted areas like to lock the stand in place with a stout piece of chain and a padlock. Another solution is to remove the stand after each hunt, leaving the steps (which are less likely to be spotted by a would-be thief) in place. Stands like the Alum-i-Lite, with its ultra lightweight, self-position T-screw, and easily adjustable mounting strap, make this fairly easy. A final advantage of these new, lightweight, easily-mounted stands is that a hunter can leave straps on trees in several different locations and simply move the stand from one to the other with a minimum of fuss.

A ladder-stand would seem to be a little awkward for dragging into and out of the woods on each day's hunt, even if it does break down into three-foot sections and weighs only

20 pounds. It is intended to be used as a "semi-portable"—that is, not removed and set up with each day's hunt. It is also a bit limited in height, and hunters who like to get up above 15 feet or so will be frustrated. Nevertheless, the obvious advantage are ease and safety of entering and leaving the stand. Ladders are a lot easier to climb than four-inch steps, especially in the dark.

Climbing stands are meant to go in and out of the woods with you on each hunt. The older models used to be terribly awkward to assemble in the dark; there were metal bars that would swing and clang or pinch your fingers, and wing nuts that would drop into the leaves and simply disappear. Some newer models do away with wing nuts altogether, and most assemble quietly and with a minimum of difficulty. The best

climbers now are not cheap (\$150 and up), but they are much more secure feeling and comfortable than the old ones were. Using trees with soft or rough-textured bark provides "bite" or friction for the back bar, which holds the stand in place, and helps with the security feeling. White oaks are good, pines are O.K. but messy, poplars are fine. Hickories are awful, and beech trees are the equivalent of greased poles. The best climbing stands are still about twice the weight of the best fixed-position stands, but backpack straps make the extra weight less of a burden.

Lots of sporting goods stores these days have poles that look like artificial trees for displaying their portable stands. Such a display is a great place to find out whether a stand is quiet. Put some weight on the stand and give it a little twist. If the stand creaks even a little bit, maybe the fastenings need tightening. If they are tightened and the stand still creaks, it is not going to be as satisfactory a piece of hunting equipment. Climbing stands are generally more subject to creaking than fixed-position stands are, but any of them can get noisy if not properly maintained.

Now is the time to start hunting for your new portable stand. You have the leisure to read all the specs, compare weights and designs, maybe even climb up in your sporting goods store's artificial tree and give the stand a real checking-out for comfort and quietness. You'll be a lot happier with whatever portable you choose if you take some time to consider how you like to hunt—how far you walk, how much you're willing to carry, whether you can leave the stand in place for days at a time, how easy a particular model is to mount, and how high you like to be above the ground. Summer is an excellent time for all this pondering. Besides, while stand hunting can never replace deer hunting as a recreational activity, it sure beats mowing the grass. □

*Steve Ausband is the chairman of the English Department of Averett College in Danville, and is a frequent contributor to Virginia Wildlife.*



# Catfishing

## It's a Whole

*It's no longer an  
excuse to watch the  
river run by and  
snooze on the bank.  
Catfishing has  
grown up and it's a  
sport to get  
serious about.*

by Gerald Almy

Catfish don't boast the romance and tradition that surround trout fishing. Nor do they draw huge crowds for high-dollar tournaments like largemouth bass. Until recently, these humble fish were shoved into the background of the angling world, denigrated and joked about by "sophisticated" sport fishermen. Catfish, the rumor had it, were a lazy-man's quarry caught by tossing rotten baits into a scummy river and propping "poles" across forked sticks waiting for bites.

In recent years, thankfully, that reputation has been changing. No, catfish haven't built up a literary heritage like trout or attracted the

"cash-for-cast" crowd that bass do, yet. But, as old myths about this fish die, they *are* gaining new respect among anglers. Catfish, according to a recent U.S. Fish and Wildlife Service survey, rank third in popularity among freshwater fishermen, just behind panfish and black bass.

Anglers are realizing that just because a catfish looks different doesn't mean it is a "trash" fish. And the fact that they are predominately bottom feeders doesn't mean they're lazy or poor fighters. In fact, catfish are game fish through and through. They are challenging to catch; they display raw power and a tenacious spirit when hooked, and they take a variety of baits and lures. When fil-

# le New Game



the respect they have long deserved in the angling community.

Four species of catfish dominate Virginia's angling scene. In order of abundance, they are: channel, blue, flathead and white. The state record channel catfish was a 31 pound, 8 ounce fish caught in the Rappahannock on October 2, 1992 by Sue Stanley. The record flathead weighed 56 pounds and was taken on March 30, 1988, in Occoquan Reservoir by James Krupkowski. The record for blue is a 57 pound, 8 ounce brute pulled from the Rappahannock River on April 11, 1993 by Hank G. Rakes. The record for white catfish is 7 pounds, 6 ounces, caught in Western Branch Reservoir on March 24, 1992, by Thomas Elkins.

Before going into tactics to use for catfish in Virginia waters, a quick rundown on some of the top places to fish might be helpful. That's somewhat of a difficult task, though, because there are so many waters in the state that harbor good numbers of these fish. Some of the best lakes include Claytor, South Hol-

ston, Anna, Chickahominy, Occoquan, Buggs Island, Gaston, Back Bay, and Chesdin. Top rivers include all of the major ones in the state such as the New, James, Rappahannock, Shenandoah and Potomac. Many smaller streams, farm ponds and Game Department-owned lakes also support good numbers of cats, so a prime fishing hole is only a short drive away for most Old Dominion anglers.

The Potomac is one of the most popular spots for catfishing among northern Virginians. Each year it produces large numbers of citation-sized channels. Some are caught in the freshwater reaches above Washington, D.C., but even more are

pulled from the tidal reaches around areas such as Pohick Bay Regional Park, Alexandria, Fort Belvoir, Mount Vernon, Gunston Cove, and the mouths of feeder creeks such as Aquia, Powell, Dogue, Potomac and Quantico.

The Rappahannock and James are similar to the Potomac in producing good catches both in their freshwater reaches and also below the fall lines at Fredericksburg and Richmond, where the tide is felt. Unlike the Potomac, however, the biggest fish in the brackish stretches of both of these rivers are typically blue cats. Starting in the mid-1970's thousands of blues were released in both of these rivers and natural reproduction is now occurring. Fish in the 20-30 pound class don't even raise an eyebrow on the Rappahannock or James anymore.

For flathead catfish the standout spots are the New River the middle James, and Claytor Lake, though Occoquan Reservoir and tailrace produces some outstanding fish as well.

A variety of tactics work for Virginia catfish. On medium-sized streams and freshwater portions of rivers such as the Shenandoah, New, James, Rappahannock and Potomac, I like to use light to medium-weight spin or baitcast tackle. Tie a size 2-4 hook on 6-10 pound line and



Catfish are challenging to catch and take a variety of baits and lures. Better yet, they don't stop biting when the weather gets hot. **Opposite:** Channel catfish; photo by M.L. Giovannetti. **Above:** photo by Soc Clay.

leted or steaked, then fried, broiled or baked to a flaky white essence, these fish are also among the tastiest that swim. Catfish grow larger than most freshwater game fish, too, with 10-30 pounders not uncommon. As if these desirable attributes weren't enough, catfish also bite well right through the hottest summer weather.

I must admit, I've secretly been a catfish fan since I picked up a rod for the first time 30 or so years ago and my father took me down to the Potomac River where we caught a mixture of cats, bluegills and the occasional bass on worms fished beneath floats. But it is refreshing to see these gamers now beginning to receive

crimp 1-3 small split shot a foot up from the hook. A nightcrawler is hard to beat for this type of fishing, but minnows, grasshoppers, crayfish, chicken livers and cut bait also draw strikes.

You can still-fish with this offering by casting it into a deep pool and waiting for the fish to find it. I prefer a more active approach. Cast the offering out and and drift it through likely looking waters such as deep holes, undercut banks, eddies, runs, areas near fallen timber and backwater sloughs, just like you would fish a nymph or earthworm for trout. If the water is particularly shallow and hang-ups are a problem, position a small bobber 2-5 feet up the line.

Bank fishing, wading or using a boat are all good ways to reach fish in these waters. Because of its simplicity, I often just fish from shore when using this approach, wading if there's too much vegetation along the banks to get to the prime areas.

When a fish taps on the bait, give it a few seconds, then set the hook by pulling back on the rod and reeling fast. Most fish you catch using this approach will weigh 1-5 pounds and put up a good struggle against the light tackle. These are also excellent eating-size fish.

If you are working broad, lower freshwater reaches or tidal sections, move up to heavier gear such as a sturdy baitcast or spinning outfit and 14-25 pound line. Use a dipsey



type sinker and bottom rig or an egg sinker of 1/2-1-ounce threaded on the line above a barrel swivel and 18-30-inch leader tied to a 1/0-4/0 hook. Big channels and blues are likely and they'll shred 8-pound line like it was sewing thread. The same

baits used in upper river sections will work when used in larger sizes, but even more popular are morsels such as cut herring, shrimp, clam snouts, chunks of shad or shad entrails. Commercially-made catfish baits are also good. But, the fish are seldom picky. I once ran out of bait and caught several nice cats on part of my lunch—a roast beef sandwich!

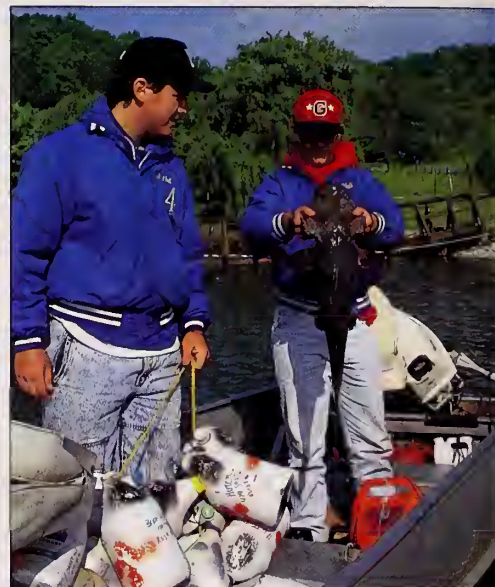
You can fish some of the best tide-water locations from shore, but a boat and motor provides more mobility to try different spots. Prime areas include deep holes in river bends, dropoffs, steep bluffs, humps, bars, points, the edges of islands and the mouths of tributaries. Fishing can be good both day and night in these areas.

On the larger rivers where big cats lurk, it's more important to leave your bait stationary. This allows the scent to spread out and attracts catfish to the offering. Wait at least 10 or 15 minutes at each likely spot before checking the bait and recasting to another area. This allows the catfish to use the sensory pores in their barbels or whiskers to help them find the food by smell. You can increase your odds when fishing like this by using two rods to cover several spots at once.

On lakes, I use the same rigs as those employed on the lower sections of rivers. Use a barrel swivel, an egg sinker above it on the main line, and a 1/0-4/0 hook at the end of an 18-30 inch leader. Large chunks of cut bait, minnows, nightcrawlers, shad, and commercial baits are the top offerings.

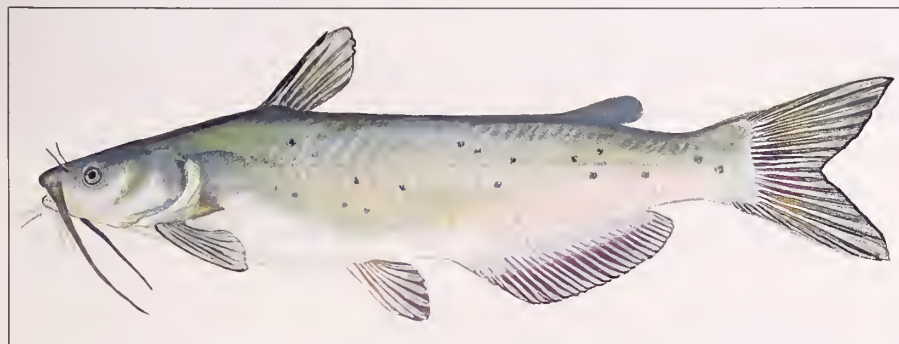
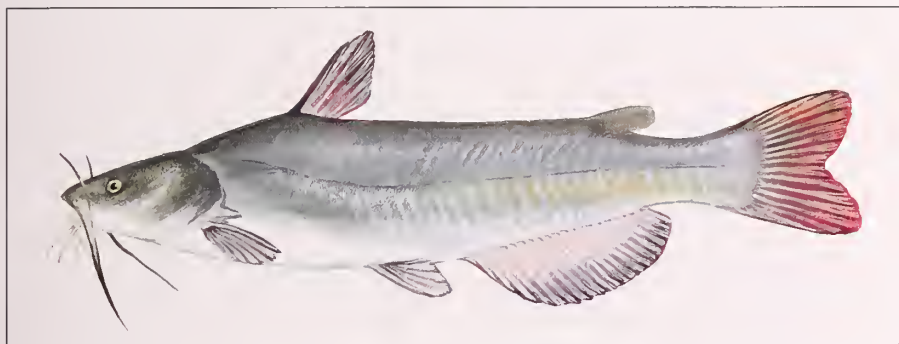
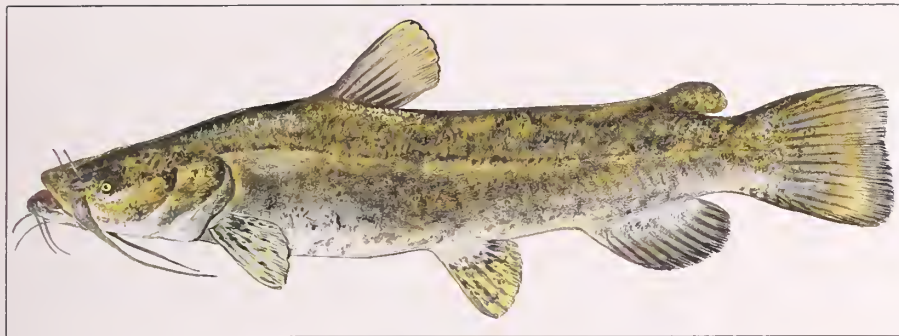
When looking for big lake catfish, concentrate on clear water areas and bottom strata of gravel, boulder, bedrock or sand. Areas around bridges, humps, islands, deep points, river channel bends, riprap near dams and flooded timber are excellent. Toward sundown and after dark you'll often draw more action on bars, points, shoals and shallow areas. A topographic map of the lake and depth finder are invaluable for pinpointing the best areas and marking them for future reference.

Shore-fishing is effective on many lakes, but when possible I like to fish



from a boat because of the increased mobility. Baits can either be still fished or you can use your trolling motor to slowly ease over likely areas, dragging the offering on or just above the bottom. This is my favorite way to fish Lake Anna, where the tactic has produced a number of channels up to 10 pounds on hot summer days when bass were proving finicky.

If the wind is blowing slowly, drift fishing can be an excellent approach to cover broad areas that might hold catfish. Put the rods in holders and use just enough weight so the bait stays on or just a foot or so



Catfishing in Virginia's rivers and lakes could turn up one of four species—and they'll all be keepers! **Opposite page:** Far left: Channel catfish. Top: Flathead catfish. Above: Blue catfish; photos by Soc Clay. **This page:** Here are the four game species of catfish in Virginia—up close and personal (top to bottom): Flathead catfish, white catfish, blue catfish, channel catfish. Illustrations by Duane Raver, originally published in the *Fisherman's Guide; Fishes of the Southeastern United States* by Charles S. Manooch, III.

off the bottom. And don't worry about the offering moving too fast for a "lazy" catfish to nab it. They can and will run down tidbits dragged from a drifting boat with ease.

While bait fishing is usually the most consistent way to take catfish, over the years I've had plenty of success with lures. And I'm not the only one. The world-record channel catfish—a 58 pounder—took a bucktail jig. A 48-pound blue caught in South Carolina nabbed a jigged Hopkins spoon. On rare occasions I've even found channel catfish in the Shenandoah and Potomac rising to mayflies hatching on the surface and have taken several of them on dry flies! It's not something I've seen often, but it does prove that these fish have too long been pigeon-holed as lethargic bottom-feeders.

Trolling with big-lipped, bottom-raking plugs such as the Hellbender or Waterdog can dredge up some brutish catfish on lakes. I've also caught lots of cats on the tidal Potomac trolling lures such as the Rattlin' Rap and Rat-L-Trap as well as medium-diving crankbaits such as the Bomber Model A.

My friend Glenn Peacock, who guides on the Potomac, says vertical jigging with spoons and vibrators (lipless crankbaits) is a good way to take big channel catfish around the bridges near Washington, D.C. in the summer. Cats will also slam into jigs with pork dressings and rubber-tailed grubs at times, even if bass are the intended quarry. Be sure to work points that jut out into the main channel, along with humps, dropoff edges, bars and creek mouths. But whether you jig, troll, cast or use the more traditional approach of bait fishing, don't overlook Virginia's catfish. They are one of the strongest fighting and best-eating fish available, biting well throughout hot summer weather, and widely available across the state in lakes, rivers and streams. □

*Gerald Almy has been a full-time outdoor writer for over 17 years. He is currently a hunting and fishing editor on the staff of Sports Afield.*



# Finding Your Ground— On a Dove Field

*Ever wonder how some hunters just happen to be on the best stands in a dove field? Here's how to pick them.*

by Bob Gooch

**D**ove hunters and lake anglers have a common problem. It pops up as the dove hunter is about to enter a big field of harvested corn or grain, and as the fisherman faces a big body of water

he is ready to tackle. "Where out there in that seemingly endless field should I take a stand for doves?" the hunter asks himself. The angler, on the other hand, is equally as puzzled as he stares at that broad body of flat



*Picking the best stand in a dove field takes a little forethought. You should take a few minutes to check the field for terrain features that will influence the birds' movements, and consider where the birds are traveling to and from. Above: photo by Lynda Richardson. Right: photo by Dwight Dyke.*

water. "Wonder where the fish are?" I suppose that's why I prefer small dove fields and little waters.

I'll leave the angler's problems for someone who has more experience in fishing big reservoirs, but let's look at the hunter's puzzle.

Obviously, just as the angler cannot successfully fish the entire lake, the hunter cannot hunt all of that

sprawling grain field. The angler has to break the lake down into smaller parts, and the hunter has to treat the dove field much the same way. The hunter, however, has the easier problem. At least in my mind, he does. He can see doves circling the field, lighting to feed, and flying out of the field for grit and water. His problem is reduced to studying the flight patterns of the birds and selecting a stand that will take the best advantage of his observations. Stand there at the edge of the field for a few minutes and several possibilities will quickly reveal themselves. But don't rush yourself. Selecting the right stand might well determine whether you scratch down a few grey ghosts or go home early with a limit.

All of this assumes, of course, you have a choice in the selection of a stand. On big invitational dove shoots where hunters are assigned stands, this is not possible. About the only thing you can do then is make such adjustments as your limited maneuverability will permit. Face in the right direction, for example. Doves have a habit of sneaking up behind you. Striking across a field, they are over your head and out of range before you can react. Set up so you will face most incoming or passing birds. Some hunters like a stand a couple of hundred feet out into the field where they can watch the woods from which the birds will appear.

When hunting alone or in a small party, however, you do have plenty of leeway, and it's best to take advantage of it. In smaller fields or when hunting in small parties, hunters are usually left to pick their own stands. As your observations establish the busiest flyways, keep your eyes open for terrain features that are likely to influence the movement of the birds.

If there are dead or leafless trees in the field, incoming birds will be attracted to them. Taking a stand be-

neath the tree to catch incoming birds is always a possibility, but tree branches may limit your visibility and your shooting. I tried that until I learned I was handicapping myself. A better approach is to note from which direction most of the birds are flying and build a skimpy blind along that flight lane. A couple of dead tree branches, a corn stalk or two, or some other kind of vegetation stuck in the ground to break up your outline is about all you need.

If someone has already spoken for a stand, you might want to get his or her permission to set up on the other side of the tree, particularly if some birds are approaching from that side.

Doves often alight in leafless trees where they have a good view of the field. They eventually leave it to feed, no doubt attracted by birds feeding somewhere in the field. A stand between the tree and the fa-



vorite feeding spot should produce some shooting—though not as good as the stand on the incoming route.

A similar setup is possible near utility lines that cross the field. As in the case of the dead or leafless tree, take a stand away from the line instead of beneath it. And watch those lines! Try to avoid shots that might hit them. I'm not sure how much damage soft lead bird shot does to utility lines, but I don't want to find out with my own shooting! One way to avoid the wires is to take birds coming in—coming toward you. It can be one of the easiest shots in dove hunting. Bring your gun up,

block out the bird and hit the trigger. In addition, doves coming to a tree or a utility line often circle before landing. This gives the patient hunter a good opportunity to get in some fast wing-shooting.

Birds may alight all along a utility line, but they seem to have favorite resting places. A little observation will tell you where most of the doves land—and one dove will draw another. If I had to pick the one best place on a utility line, I would choose the highest point. Utility lines, of course, follow the lay of the land. One of my favorite dove fields rises gently from one end to a shallow ridge near the middle and then pitches slowly to a swamp beyond. Naturally, the spine of the hill marks the high point for the utility line, and that is one of my favorite stands in that little field.

Leafless trees and utility lines attract a lot of birds, but in many fields you will find neither. Still, they may be good dove fields that provide a lot of fast shooting. I recall a hunt of a number of years ago when a friend and I were sharing a reasonably large harvested cornfield. We moved about for awhile with mediocre success until I noticed a line of trees that led from a woodlot deep into the field. I watched it for awhile and noticed a number of birds entering the field from the woodlot and following that line of woods into the field before swerving off to other points in the field. I called to my friend and we took stands near the point of the line of trees, he on one side of the point and I on the other. Some birds would fly along his side of the line of trees, others on mine, and some just above the trees. By respecting each others shooting opportunities, we enjoyed a fine afternoon of shooting. We both limited out well before the end of legal shooting time. Over the

years since, I have found myself looking for such terrain features. They are not always there, but when they are, you can expect good shooting.

When the above features are not available, observe the field until you pick up the major routes the birds follow in entering and leaving the field. Is there a woodlot bordering the field? Usually there is. Doves like to rest there in the shade away from the midday heat and enter the field to feed in the middle of the afternoon. For some reason known only to the birds, they often fly certain routes into the field. Try to determine the major ones and set up along that route—anywhere you can find reasonable concealment. Likewise, they may follow a different pattern when leaving the field.

Understanding the daily habits of doves can help you in the selection of a stand. Since we hunt the afternoons only during the major dove seasons in Virginia, let's look at that first. After a morning of feeding, the birds tend to seek the shade of a nearby wooded area to rest during the midday hours. Most seem to leave the woods and head for the fields near the middle of the afternoon, feed, and then fly to a convenient sandbar, roadside, or some other area where sand and gravel are available for grit. Then to water—one reason sandbars are popular—and to evergreens to roost. The morning routine is pretty much the same, except that they fly from the roost to the fields.

Regardless of where you make your stand, try to avoid backing up against a woodlot or forest edge. Birds leaving the woods are suddenly over your head and well into the field before you can react fast enough to get off a shot.

Instead of backing up against the forest edge, move out into the field far enough so that you can pick up the birds as they suddenly appear just above the trees. You may want to sit facing the woods instead of into the field. The flight of the birds will determine this.

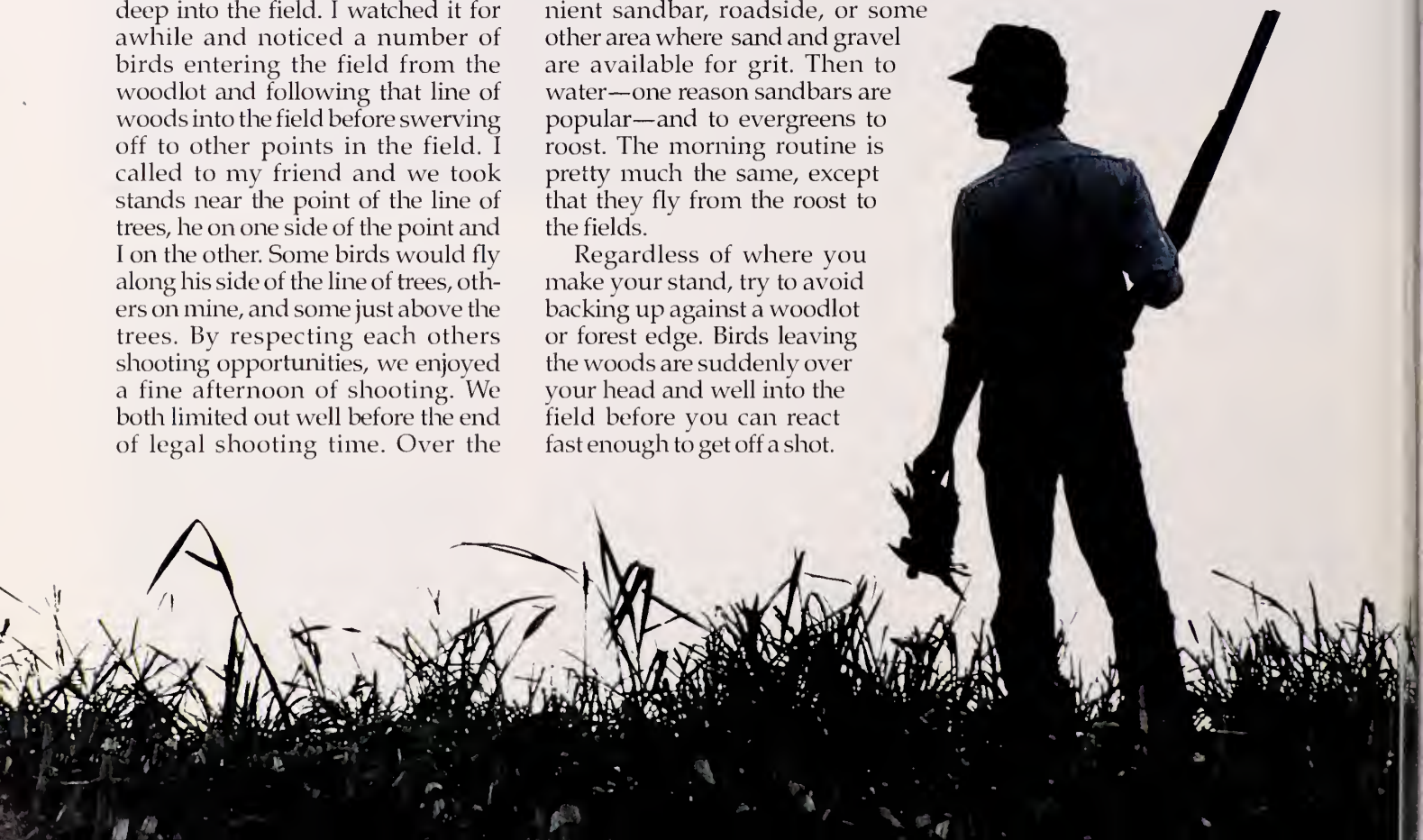
Your position along the line of flight is also important. I find that most right-handed shooters do best on birds flying from their right to their left. It's a more natural swing, since you are pulling your gun instead of pushing it as you do on birds flying from your left to your right. With that in mind, obviously you will want a stand on which most of the birds are approaching from your right. The reverse will be true for left-handed shooters.

The casual dove hunter is mostly just a shooter, going along on invitational shoots, and taking his assigned stand. But good dove populations offer many opportunities for real hunting also. That's what we're talking about here. □

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*Bob Gooch is a freelance writer, and the author of many hunting and fishing books. He lives in Troy, Virginia.*

*photo by Lynda Richardson*



# Show How Much You Care...



*Southern flying squirrel, photo by Patrick M. Collins*

## ...Give To Virginia's Nongame and Endangered Species Fund

Many of Virginia's wildlife are in danger. Suffering from habitat loss and the dangers of pollution which threaten their survival, many species in the state are struggling to survive.

The Department of Game and Inland Fisheries is responsible for the protection and conservation of all wildlife in Virginia, but we receive no state tax dollars, and we need your help to do our job. Help us fund critical research and management programs for the state's

nongame and endangered species by contributing to our Nongame Wildlife Fund, which is supported by voluntary contributions made through our state tax checkoff program and direct giving.

Please send in your tax-deductible check (made payable to the Treasurer of Virginia) to: Virginia Nongame Wildlife Fund-VW, Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104.

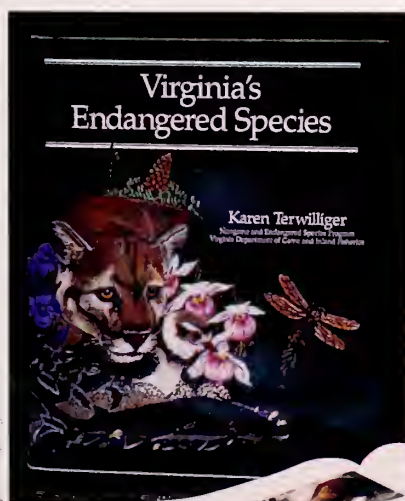


## Resource Guide Available On Virginia's Endangered Species

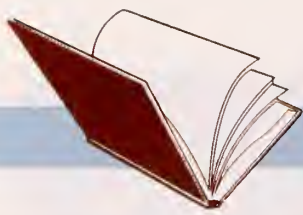
Order the only comprehensive resource guide on Virginia's Endangered Species for \$32.94 (softcover) or \$59.95 (hardcover). This 675-page guide identifies and describes more than 250 rare and endangered plants and animals in Virginia. Produced by the Virginia Department of Game and Inland Fisheries and other state natural resource agencies, this book documents the latest scientific information on Virginia's endangered species, information which is available in no other publication, *anywhere*.

Send your check plus 4.5 percent sales tax and \$3.00 ship and handling charges to: McDonald and Woodward Publishing Company, P.O. Box 10308, Blacksburg, VA 24062-0308. Phone: (703) 951-9465.

To order a Virginia's Endangered Species poster featuring the cover illustration on the book (*left*), please send a check for \$8 (made payable to: Treasurer of Virginia) to: VA Endangered Species Poster Offer, Attn: Diane Davis, VDGIF, P.O. Box 11104, Richmond, VA 23230-1104.



*photo by Roy Edwards*



# Journal

## What Is That Creepy Crawly?

Aquatic insects may not inspire "oohs" and "aahs" from most of us, but if you're interested in the health of a stream or the food of trout, bass, and other creatures of Virginia's freshwater deep, then the Izaak Walton League of America (IWLA) has produced the booklet just for you. Called the Monitor's Guide to Aquatic Macroinvertebrates, it was written by the staff of IWLA's Save Our Streams (SOS) Program and is a simple 46-page field guide for the identification of aquatic bugs. Says SOS national director Karen Firehock: "This guide allows the lay person to become an amateur entomologist. We've taken technical language and put it into terms anyone can understand so they can learn about the quality of their rivers."

For a copy, send a check for \$5 to: SOS, IWLA, 1401 Wilson Blvd., Level B; Arlington, VA 22209-2318.

## Free Tips to Stay "Green"

For those wanting to make environmentally sound decisions about shopping, lawn care, and other activities, the Environmental Protection Agency has produced a free booklet, "The Consumer's Handbook for Reducing Solid Waste," available by calling 1-800-424-9346 Monday through Friday, 8:30 a.m. to 7:30 p.m. Request publication number EPA530-K-92003. □

## 1993 Virginia Big Game Contest

The 54th Annual Virginia Big Game Contest is coming up! On September 10-11, the Western Regional Championship will be held at the Rockingham County Fair-

grounds, Harrisonburg, VA, located on U.S. 11, 1.6 miles south of exit 62 off I-81. The entry deadline is noon on September 11. For more information, contact Boyd E. Skelton, 412 N. Main St., Bridgewater, VA 22812. Phone: 703/828-3393.

On September 25 and 26, the Eastern Regional and State Championships will be held at James Blair Middle School, 117 Ironbound Road, Williamsburg, VA. The entry deadline is 10 p.m. on September 25. For more information, contact Carol T. Hall, P.O. Box 1860 Williamsburg, VA 23187-1860. Phone: 804/220-3371.

Entries of white-tailed deer, black bear, and wild turkey must have been bagged in Virginia with a legal sporting firearm or bow during the 1992-93 hunting season. Each entry must be accompanied by its big game check tag. □

## Special Resident Canada Goose Season Set

The Department of Game and Inland Fisheries has established a special early goose season this year in an attempt to harvest the expanding population of resident geese in Virginia. The season will run from September 7 through September 15 and is restricted to specific hunt zones which include portions of the northern and central piedmont and the lower peninsula. The bag limit is 3 geese per day, with six in possession.

A free permit is required in order to obtain harvest and hunter participation data as required by the U.S. Fish and Wildlife Service. Call 804/367-1000 for further details. □

## Letters

I read with interest your "Out On A Limb" editorial in the June issue

of *Virginia Wildlife*. While I agree with the notion humans can sometimes be "dirty birds," I disagree with your apparently primary assertion that population is the problem. Blaming population is far too simple.

Your example of the Indians was very good for demonstrating that even in a time when we were theoretically more one with nature we can be an ugly lot. But examining this very example more deeply is the undoing of the primary assertion. The pollution and misuse of the land carried out by this culture occurred in a period of much lower population than today. When native cultures were the primary human influence on the North American continent the total population was far, far less than the tens of millions today. Yet, as you pointed out, there were examples of environmental neglect and misuse.

I propose that then, as now, the problem was not how many people, but how the people acted. And in the United States today it is not how many people use the resources, but how much does each person use? Per capita consumption in the U.S. is highest in the world.

There is still plenty of land in this country to settle and use. Even in Virginia, with several highly developed areas, this is the case. There is even wildlife that can coexist with development (admittedly, not all wildlife). The peregrine falcons nesting on skyscrapers are good examples. The white-tailed deer has been known even to overpopulate developed areas in coexistence with humans. So once again, the problem is not simply population, but rather what that population does to use, abuse, or preserve its natural resources.

Wayne Fedora  
Garner, NC

By Joan Cone

## Virginia Catfish Dinner

Catfish are a great illustration of the old proverb, "Never judge a book by its cover." For while they have whiskers and spines, along with an oversized mouth and undersized chin, all our Virginia catfishes have one thing in common—they are among the most tasty of all fishes.

Catfishes, whether the big blue and white ones found in the James River and other large bodies of water, or the smaller channel catfish, bullheads and white catfish, are wonderful table fare. To prepare for cooking, separate the catfish from skin and bones. The easiest way to do this is by filleting and then skinning each fillet separately. By filleting first, you save yourself the ordeal of trying to skin your fish all at once.

### MENU

*Crabmeat Stuffed Eggs*  
*Pecan Fried Catfish*  
*Alison's Corn Pudding*  
*Zucchini Sauté*  
*Confetti Coleslaw*  
*Graham Cracker Ice Cream*

### Crabmeat Stuffed Eggs

1/2 cup crabmeat  
 6 hard-cooked eggs  
 2 tablespoons finely chopped celery  
 2 teaspoons lemon juice  
 2 tablespoons sour cream  
 2 tablespoons mayonnaise  
 1/4 teaspoon curry powder  
 1/8 teaspoon salt  
 Pepper to taste  
 Minced fresh parsley for garnish

Flake the crabmeat, discarding any shell or cartilage. Shell eggs, cutting each in half lengthwise. For the filling, transfer yolks to a mixing bowl and mash well with a fork until free from lumps. Add the crab-

meat and remaining ingredients, blending all together well. Using a pastry bag or a spoon, fill eggwhite halves, mounding stuffing slightly at the center. Garnish with parsley. Refrigerate, covered, for several hours. Makes 1 dozen.

### Pecan Fried Catfish

1 egg, beaten  
 Salt and pepper  
 1/2 cup unseasoned dry bread crumbs  
 1/2 cup ground pecans  
 1 1/2 pounds catfish fillets (6 ounces each), skin removed  
 Vegetable oil  
 4 tablespoons margarine or butter  
 1 tablespoon fresh lemon juice  
 1/8 teaspoon cayenne

In medium bowl, combine egg, salt and pepper. In shallow dish, combine bread crumbs and pecans. Dip fillets first in egg mixture and then dredge in bread crumb mixture to coat. In 12-inch skillet, heat 1/8-inch oil over medium heat. Add fillets. Fry for 5 to 8 minutes, or until golden brown, turning over once. Wipe out skillet with paper towels. In same skillet, melt margarine over medium heat. Stir in juice and cayenne. Spoon sauce over fish. Makes 4 servings.

### Alison's Corn Pudding

This is one of our daughter's favorite recipes.

1 cup sugar  
 1 can (16 ounces) creamed corn  
 1 cup milk  
 2 tablespoons flour  
 1/2 teaspoon salt  
 1/4 cup margarine or butter, melted  
 3 eggs or 3/4 cup egg substitute

In a buttered 2-quart casserole, mix together first 6 ingredients. Add

eggs, one at a time, stirring to mix with corn mixture. Bake in a preheated 375 degree oven for about 1 hour or until knife inserted in center comes out clean. Serves 6 to 8.

### Zucchini Sauté

4 tablespoons butter  
 4 medium zucchini, grated (ends cut off but skins left one)  
 1 tablespoon dried dill weed  
 Salt and pepper

Melt butter in a sauté pan. Add the zucchini and dill. Toss over medium heat for about 5 minutes or until just tender. Season to taste and serve. Serves 3 to 4.

### Confetti Coleslaw

1 cup shredded green cabbage  
 1 cup shredded red cabbage  
 1 carrot, peeled and grated  
 1/4 cup reduced-calorie mayonnaise  
 2 tablespoons cider vinegar  
 1 teaspoon sugar  
 1 teaspoon caraway seeds  
 Salt and pepper to taste

In a bowl, combine green and red cabbage and carrot. Mix mayonnaise with vinegar, sugar and caraway seeds. Pour over vegetables. Toss to combine. Season with salt and pepper. Serves 4.

### Graham Cracker Ice Cream

2 cups half and half cream  
 1/2 cup sugar  
 1 cup rolled graham cracker crumbs  
 1 teaspoon almond extract

In a bowl, combine cream and sugar and mix well. Place mixture in a tray and freeze. After mixture is frozen, remove from tray and place in a bowl, beating until fluffy. Add graham cracker crumbs and almond extract and freeze quickly. Makes 1 1/2 pints. □



by Col. William Antozzi, Boating Safety Officer

## Drunken Boat Operators Are Dangerous

About 50% of all boating accidents are alcohol-related and research indicates that alcohol is involved in over 65% of all drownings. We don't know how many accidents and drownings are related to other mind-altering substances, but there are a lot less than those which are alcohol-related.

Many boaters seem to think alcohol consumption adds to boating fun and proceed to drink more than they should. Beer appears to predominate because it is easy to carry along and seems to be a thirst quencher. Many people believe it is less intoxicating than other alcoholic beverages, but one 12-ounce can of beer, one six-ounce glass of wine and one shot of 80 proof liquor all contain about the same amount of alcohol and have the same effect.

Once alcohol has been consumed, nothing will sober the drinker except time. The body will metabolize about one ounce of alcohol per hour, so a legally drunk person takes about seven hours to become sober.

Good judgment is one of the first things drinkers lose. After a drink or two, people tend to lose their inhibitions and are more likely to take chances and perform bold and daring acts. Because judgment is affected, they may be unaware that they are taking unnecessary risks.

Boaters also are exposed to sun, wind, glare, vibration, noise, and boat motion, all of which can cause fatigue and reduce their ability to safely operate a boat. After about four hours of exposure to boating stress factors, boaters seem to develop tunnel vision. They stare straight ahead, unable to observe what's

happening around the boat, and react to only those objects directly in front of them. When alcohol is added, they have reduced ability to distinguish between colors, particularly red and green, such as the running lights on a boat.

Alcohol slows a person's responses. This can be dangerous when a split-second reaction is necessary to avoid danger. Coordination is so adversely affected that a drunken boater will have great difficulty in trying to swim to a life-saving device, let alone put one on. Alertness and ability to concentrate are reduced. A boater with a wandering mind has difficulty spotting potential hazards.

Vision provides about 90% of the information used in operating a boat. The pupil of the eye acts like a camera shutter. As alcohol is imbibed, it diminishes the pupil's ability to control the amount of light entering the eye, which reduces the ability to see, particularly at night. It is also a depressant and affects control of muscles that focus both eyes on the same object. The result may be fuzzy or double vision, or the brain may suppress the function of one eye and the result will be loss of depth perception.

Alcohol enters the bloodstream by passing through the stomach and intestinal walls. That happens quickly because alcohol does not

need to be digested. When it reaches the brain, it adversely affects seeing, thinking, and balance. Loss of balance is especially dangerous and causes many people to fall overboard. When that happens, some are so confused that they cannot tell up from down, and consequently swim down to their deaths.

Alcohol consumption need not be part of boating. Those who have switched to nonalcoholic beverages report that they have more fun because they are more alert, remember everything that happens and have no bad aftereffects. Without the use



*Operating a boat while under the influence of alcohol is a serious violation of the law—and extremely dangerous. Play it safe for your own sake—and for others. Cruise without booze! Photo by Mel White.*

of alcohol, boaters find it easier to follow instructions on nautical signs and recognize navigation aids. They can remember nautical rules and feel better about their responsibilities. If alcohol use results in accidents, injury or death, all the regrets in the world will not help much. □

# Photo TipS

By Lynda Richardson

## Simply Silhouettes

My face was dusted with a fine powder that swirled up from the road and into the open windows of the four-wheel drive vehicle. We bobbed and bounced along the trail as sounds of morning mingled with the low rumble of our engine. Entering the vast clearing, we could get a better view of the glowing sky as the first sliver of sun streaked toward us. As the sun emerged, I frantically looked around for a silhouette subject.

According to *The American Heritage Dictionary*, a silhouette is "a representation of the outline of something, usually filled in with black or another solid color." In photography, a silhouette is a subject

pleased with the results, or they can't figure out why the subject turned out so dark.

Silhouettes often occur because the light meters in automatic cameras read the overall scene and compensate for brightness behind a subject. When shooting a subject against the sky, it normally tries to make a correct exposure for the sky background. The foreground subject usually appears dark while the sky is beautifully exposed. The subject is dark because of the exposure differences between the subject and the brighter background.

In slide film, exposure is critical because it doesn't have the exposure latitude of print film. Anytime you have a two f-stop difference between a subject and a brighter, properly exposed background, your foreground subject will go black. When shooting prints, you have a wider margin for error which can be compensated in the lab during the printing process. In fact, with print film, your intended silhouette may be lost when the lab corrects your "mistake."

When I want to create a silhouette photograph, I first look for a subject I can visually position against the sky.

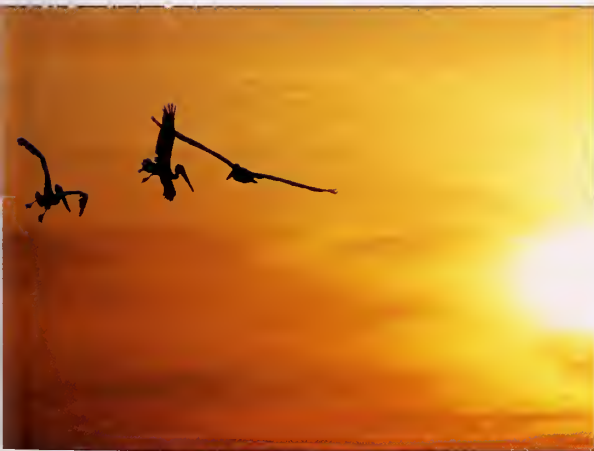
Depending on your artistic rendering of the scene, you may want to include vegetation surrounding the subject, or you may want a "clean" image showing the immediate subject only. After composing your shot, you need to choose an exposure that will create the silhouette effect. To do this, point your camera meter at the sky to make your reading. (If the sun is in your shot, DO NOT look directly at the sun because it can damage your eyes.) What I do is to point my

camera at a mid-tone in the sky and get my reading from that. Usually this is an area to the immediate right or left of the sun and approximately two inches away as seen from an earthbound perspective. I frame my exposure reading so that I only see sky in my viewfinder.

If I included my subject in my exposure reading, then its "darkness" would be averaged in and could cause a big shift in exposure. For example, say you want a tight silhouette of a mountain lion on a branch against a rising sun. You take an exposure reading of just the sky and the light meter says 1/250 at f16. Now, for an experiment, you take an exposure reading with the lion in the frame and the light meter says 1/250 at f5.6. If you were to expose your photo at f5.6 instead of f11, your sky would most likely lose that rich color and your silhouette effect would probably be lost.

I find that the best times of day to create silhouettes are dawn and dusk. As the sun is rising or setting, it will provide an amazing variety of rich color to use as a dramatic background for any subject. And if you can't find a subject that day, sometimes a spectacular sunset is enough to satisfy your picture-happy finger. If you arrive late and miss the best color of the day, you still have an opportunity to make an exciting shot as long as you are prepared. Colored filters have been developed for just such a situation. Though I rarely have used colored filters in the past, I am finding these items a useful addition to the camera bag.

Silhouettes can be some of the most beautiful, and the easiest, images you can create. The next time you see something that has strong graphic appeal, see if you can make it into a dramatic silhouette! □



The best times of day to create silhouettes are dawn and dusk. Use the rich color of the sky as a dramatic background for your subject, as I did to silhouette these brown pelicans; photo by Lynda Richardson.

which records black against a lighter background, usually a colorful sunrise/sunset or colorless sky.

Silhouettes are very easy to create. In fact, many people create silhouettes by accident when using cameras that automatically pick settings for them. They're either very

# Preserving in bronze what we're losing in the wild

## An Endangered Species Series by Turner Sculpture

Capturing the essence of Virginia's endangered species in bronze, David Turner of Turner Sculpture has just completed the second in his limited edition series to raise funds for Virginia's Nongame and Endangered Species Program.

This time, David has turned his artist's eye toward one of Virginia's rarest mammals, the Northern flying squirrel. An elusive, elf-like spirit of our mountaintop spruce forests, this tiny squirrel weighs no more than five ounces and is known only to three locations in Virginia. Strictly nocturnal, it emerges from its nest of shredded bark, lichens, and moss once darkness has fallen and glides silently from tree to tree, its outstretched feet unfurling the parachute-like flaps of skin attached to each wrist and ankle.

Here, David Turner's 7" high sculpture of a Northern flying squirrel (photo approximates actual size) is poised for flight on an old-growth snag covered with the lichens and bracket fungus which make up a large part of its diet.

Like the bronze sculpture of the Bewick's wren also featured on this page (less than 20 are left for sale), a limited edition of 200 Northern flying squirrels will be cast and sold solely to benefit Virginia's Nongame and Endangered Species Program, the program responsible for the management and protection of all the Commonwealth's rare and endangered wildlife. The money raised from the sale of these two sculptures will provide the program with over 1/10th of its present operating budget.

Each sculpture has a purchase price of \$325. Turner Sculpture will receive \$175 to cover their production costs, while the remaining \$150 will be sent to the Virginia Department of Game and Inland Fisheries as your contribution to Virginia's Nongame and Endangered Species Fund. A tax advisor should be consulted regarding the personal tax deductibility of this contribution. Each piece sold will include a certificate of origin and a letter confirming your contribution to the future of Virginia's wildlife.

You may order either the Northern flying squirrel or the Bewick's wren by sending a \$325 check for each signed and numbered sculpture to: Turner Sculpture, Box 128, Onley VA 23418. For credit card orders, call: 804/787-2818. **Note:** If you have already purchased a Bewick's wren and would like the same limited edition number in the Northern flying squirrel edition, please send in your order as soon as possible.



Bewick's wren (height: 12 inches) by David Turner. Available for \$325.





# 1993-1994 Virginia Wildlife Calendar

## Yours to Enjoy

**W**e have a new look, and it's yours to enjoy. More pictures (twice as many!) along with delightful descriptions of 12 animals to accompany stunning photographs by world-class photographers. These photos will bring you something new to enjoy each month, and they are so frameable that you may want to keep these birds, fish, plants and animals for years to come.

And don't forget all the information on our calendar pages—from the best times to hunt and fish, to the red letter days when the robins return in the spring and the redbuds begin to bloom.

Remember, our special 1993-94 Virginia Wildlife Calendar starts in September and runs through next August. And, it's only \$6.50! So, fill in the order blank on the gray page inside this magazine...

*Do it today!*



# Another Classic



## For your collection

The Virginia Department of Game and Inland Fisheries has just revealed another classic in its Wildlife Conservationist license plate series! Now you can proudly display your commitment to wildlife with either a largemouth bass license plate or a mallard license plate. For every set of Wildlife Conservationist plates you buy, \$15 will be set aside for the Virginia Department of Game



and Inland Fisheries' Game Protection Fund. The money will be used for wildlife conservation management and research in the state.

Wildlife Conservationist plates are available from the Department of Motor Vehicles. Just fill out the mail-in form on the gray card in this magazine or stop by any DMV office. Pick up your classic plate and give wildlife a ride!